BULLETIN of the

Dental Guidance Council for Cerebral Palsy

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BULLETIN STAFF

Communications for the Bulletin should be sent to the Editor, c/o United Cerebral Palsy of New York City, Inc., 70 Fifth Avenue, New York 11, N.Y. The Bulletin will be published three times a year.

Contents

Editorial

Dentistry, for children with cerebral palsy and other handicapping conditions, represents an important component in the over-all picture of their total therapeutic and habilitation needs. Several surveys have indicated that, although the average dental disease rate of some groups of these children may be no greater than that in children not so handicapped, the amount of care they have received is often significantly lower. In terms of the "DMF" rate, this is indicated by a lower "F" value for the groups with the handicapping conditions.

Should this difference in amount of dental care provided continue as these children become older, it is inevitable that many of these unfilled carious teeth in the "DMF" reckoning will develop into acute situations requiring extraction. Again, while there may be no significant difference in comparison of total "DMF" rates in two groups of older subjects, there may be a significant difference in comparison of one of the component factors. This difference may involve the "M" factor, or missing teeth.

This situation is demonstrated clinically repeatedly when many of the older patients with cerebral palsy and other conditions present for treatment. Their mouths are evidence of a cumulative lack of dental care. The complicated procedures required at this stage are vastly more difficult to perform because of interferences arising from oral neuromuscular involvement.

How much more logical and simple would the solution for the entire problem become if dental examination and care were made available for all children with cerebral palsy and other conditions. At the present time progress has been made in the effort to achieve dental care for all of these children. United Cerebral Palsy Associations, and the affiliated state, county and city associations have been active in promoting establishment of such facilities for dental care for their patients. For several reasons, a large portion of the treatment to be rendered must be performed at dental clinical facilities affiliated with broader medical treatment centers. But participation of a larger portion of the dental profession is needed to fulfill the total need, and this effort must be extended to apprise more dentists, both in areas distant from such centers and in large cities, of this professional obligation.

The Bulletin of the Dental Guidance Council for Cerebral Palsy hopes to reach as many dentists as possible in order to enlist their aid in providing complete dental care to all children with cerebral palsy and other handicapping conditions.

President's Message

As the Dental Guidance Council starts its 14th year, it is with great pleasure that I can announce the sponsoship by the Council of an essay contest for Junior and Senior dental students of this country. Details concerning the contest will be transmitted to the Deans of the various Dental Schools. At this time, I can assure any prospective participant that the winner will receive a substantial cash prize and possibly a trip to New York City with a chance to present the prize essay at our annual dinner meeting in June.

The members of the Council are looking forward with a great deal of anticipation to the symposium sponsored by them at the New York Academy of Medicine in November. Information concerning this event can be found elsewhere in this publication. It is hoped that as many physicians, dentists and members of allied disciplines as possible will try to attend what we all believe will be a worthwhile evening.

Let me extend to all interested readers an invitation to join the deliberations of the Council. New ideas and new faces are always welcome and have helped a great deal in the past in enabling us to fulfill our purposes. Information about location and time of our meetings can be obtained by contacting our Executive Secretary, Mr. Edward Kilbane at United Cerebral Palsy of New York, Inc., at 70 Fifth Avenue.

Andrew M. Linz, D.D.S., M.Sc.

Recommended Reading

Highlights of Progress in Research on Neurological and Sensory Disorders (1959). Published by the U.S. Department of Health, Education, and Welfare, Public Health Service. Public Health Service Publication No. 741 (52 pages). This publication contains reports on studies sponsored by the National Institute of Neurological Diseases and Blindness.

With recognition of neurological and sensory disorders as a primary cause of lifelong crippling in this country, the National Institute of Neuromuscular Diseases and Blindness has undertaken a major effort to overcome this problem. The effort includes sponsorship of projects bearing on all aspects of disturbed function, etiology, and correction, such as, neurosurgery, neurochemistry, muscle and nerve regeneration, evaluation of epidemiological studies, and others.

This interesting pamphlet may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. Price 25 cents.

SCIENTIFIC SECTION

Annual Scientific Session

THE XIIITH

Annual Scientific Session

OF THE

DENTAL GUIDANCE COUNCIL
FOR CEREBRAL PALSY

WILL BE HELD ON

THURSDAY, NOVEMBER 16, 1951
8:30 P. M.

AT THE NEW YORK
ACADEMY OF MEDICINE BUILDING
103RD STREET AND 5TH AVENUE
NEW YORK CITY

* * * * * *

MEMBERS OF THE DENTAL AND ALLIED PROFESSIONS AND THEIR FRIENDS ARE WELCOME AND ARE URGED TO ATTEND THIS MEETING. THE PRESENTATIONS ARE OF BROAD SCOPE AND PROMISE TO BE OF GREAT INTEREST.

Program

THE ORAL-FACIAL COMPLEX IN PATIENTS WITH NEURO-MUSCULAR DISORDERS

PRESIDING

ANDREW M. LINZ, D.D.S., M.Sc. (DENT)
President, Dental Guidance Council for Cerebral Palsy.

SPEAKERS

ROSS M. CAMPBELL, M.D.
Associate Professor of Clinical Surgery.
New York University College of Medicine.
"Some Plastic Surgical Problems in the Facial Area in Patients with Neuro-Muscular Disorders."

MARY STEWART, M.A.
Research Project Coordinator,
Manhattan Eye, Ear and Throat Hospital.
"The Patient with Neuro-Muscular Disorders and His Social Environment."

ALBERT GREEN, D.D.S.
Supervisor, Cerebral Palsy Dental Clinic,
Columbia University School of Dental and Oral Surgery.
"Dental Problems in Patients with Neuro-Muscular Disorders."

Dr. Jacobziner Guest Speaker June Meeting

At the Annual Meeting of the Dental Guidance Council for Cerebral Palsy on June 14, 1961, Dr. Harold Jacobziner, Assistant Commissioner, Maternal and Child Health, New York City Department of Health, described the scope of the activity of the Department in providing for the health needs of the City's 2-1/2 million children from birth to 21 years of age. The Department is concerned with their total health needs. One third of the Health budget, $12,000,000, is for services to children; of this about $5,000,000 is allocated for children with handicapping conditions.

The major concern of the Maternal and Child Health Services is to improve and promote the health and welfare of all children, the handicapped and non-handicapped alike. Since health is indivisible the services are comprehensive in scope and include physical, mental, emotional and social components. Attention is constantly paid to improving the quality of care rendered not only in the direct services run by the Department but in all treatment agencies which provide medical care to pregnant women and children.

In general the health picture of the representative child is a broad one and there is recognition of the basic dependence upon the antecedent factor, i.e., the health of both parents.

In providing for the measures and processes for these services for children, there is a body of regulations for the facilities involved in distributing them. There are 96 hospital facilities for child and maternal health care and annual inspections are made at these facilities. Reports based on these surveys are rendered to the directors of the hospitals so that any inadequacies found may be corrected.

Thus prenatal care, birth care and postnatal care programs are supervised. The Health Department provides necessary medical care at 83 facilities for children of families who cannot afford private care. This includes a complete examination, the 4 in 1 immunization injections, vaccinations, advice on accident prevention, parent counseling, various tests to detect metobolic disorders, etc. Patients with positive results are referred for indicated medical care. This alertness in testing, and in utilizing advances and findings of new studies relating to newborn, have resulted in marked reduction in the incidence of several important conditions which had occurred previously with significant frequency.

Such special observation and care are also exercised in the care for premature infants. The city permits the expenditure of $26 per day for each premature child in specially approved centers for these

children. This special care has demonstrated a 4 to 1 rate of improvement in survival.

A comprehensive school health program is also maintained with part time physicians, and full time and part time nurses. The dental care program is a large part of this program and dental clinics are maintained at 27 district health centers and in 147 schools. Each child entering school receives a complete dental examination as well as a general physical evaluation. Where defects or disorders are noted, recommendations are made about obtaining necessary care. The entire program is geared to recognize the need for care where it exists, to promote treatment, and to provide follow-up care for acquired and congenital conditions. A great effort is made to develop a potential for as much improvement of health and prevention of disorders as is possible, with the most effective use of the funds available. A program for the correction of orthodontic defects is also maintained.

In an effort to improve procedures and raise standards of medical care, this division also conducts research programs to evaluate effectiveness of the existing programs and procedures used.

Accident prevention also receives a great deal of emphasis. This relates to publicity and measures for prevention of drug poisoning and other types of poisonings, which occur in young children with alarming frequency. Parents are told of drugs most commonly responsible, and of simple practicable stpes to eliminate these and other accidental occurrences in the home. An elaborate program of education for physicians both pre-service and in-service and for practicing physicians in general is also maintained.

Abstracts

One of the biggest problems in diagnosis for handicapped patients is the inability of the doctors to obtain adequate radiographs. A group at Michael Reese Hospital, Dental Department, Division of the Handicapped, evaluated various radiographic techniques. A successful method was developed and is described.

The x-ray series consisted of a right and left lateral headplate, and upper and lower anterior intra-oral films. Equipment for lateral plates consisted of a 5x7 metal cassette with intensifying screen or 5x7 paper holder (the metal cassette is preferable). In using cassette, the exposure time was 1/2 second, 65 KV, 10 MA; using the paper holder exposure time was 2 seconds, 65 KV, 10 MA.

The patient is seated in an upright position with the plane of occlusion parallel to the floor. With the teeth in occlusion, the cassette was held parallel with the long axis of the upper molars. A horizontal line across the center of the holder was parallel to, and in line with, the occlusal plance, the center of the cassette being at the mesio-occlusal of the upper first molar. The head was rotated 20 degrees horizontally, enough to permit placement of the tube posterior to the posterior border of the ramus at genial angle. The tube was aimed at right angles to the cassette at the mesial of the upper first molar on the opposite side. In most cases, someone held the cassette for the patient. For better stabilization, a cassette holder was designed.

Lateral head plates serve to disclose other conditions, as: gross pathology, suspected fractures, observation of permanent dentition developing in young children, and impacted molars. Steinberg, A.D., Bramer, M.L., and May, B. Simplified Radiographic Survey for the Handicapped Patient. Fortn. Rev. Chic. Dent. Soc. V. 41, No. 5 (March 1, 1961).

A group of 12 cerebral-palsied children at the State University of Iowa Hospital for Severely Handicapped Children were studied with regard to their past and present dietary intakes and blood concentrations of hemoglobin, ascorbic acid, vitamin A and carotene. While in residence, the subjects were offered a diet in accordance with the National Research Council recommendations for children of similar ages. A supplemental vitamin preparation was included. Data was obtained at regular intervals over a 5 month period.

It was found that the average consumption of milk was one quart daily. This accounted for 40 to 50% of the calories consumed. The amount of calories consumed by the group was lower than the Recommended Dietary Allowance for children of similar ages. However, one must consider that these children, when compared to control groups, are on the average, shorter in stature. The fact that rapid weight gain in these children may be undesirable, plus the tendency for spastics to avoid exercise, may make this lower caloric intake desirable.

Hemoglobin concentrations were found adequate in most instances. The level of serum ascorbic acid was more than adequate. However, had not supplemental vitamin been given, one half of the group would not have been receiving the recommended allowance. Vitamin A levels were found satisfactory in all cases. It is suggested that perhaps supplementary vitamin A may not be required throughout the year.

On the basis of this study, with regard to the factors examined, the children appeared to be well nourished.
Karle, I.P., Bleiler, R.E., & Ohlson, M.A. Nutritional Status of Cerebral-Palsied Children. J. Am. Diet. Assoc., 38:22 (Jan. 1961).

A report on dental management of adult patients with cerebral palsy presents a clear statement of the difficulties in providing dentistry for these patients, who represent probably over 30% of the total number of cerebral palsy patients. This percentage is likely to increase continually with expansion of facilities for general treatment reaching an increasing number of patients. It is felt that these patients represent "a challenge because of their inability to cooperate"; also that "the most difficult problem of all in cerebral palsy is securing adequate relaxation and reducing excess motion in the patient so that dental work can be done". Past efforts to secure relaxation, as with mephenesin, and barbiturates, are considered not sufficiently effective. In their stead, the authors present a procedure with intravenous premedication, and local anesthesia for pain control.

Initial relaxation is obtained by premedication with barbiturate (pentobarbitol sodium, 50 to 200 mg.) given intravenously without causing hypnosis; this is followed by slow intravenous injection of meperidine (20 to 75 mg.) mixed with scopolamine (0.3 mg.) and diluted to 5 cc. with sterile water.

Five case reports of patients with cerebral palsy are presented in which extensive restorative work is accomplished in as many visits as were required, following the same premedication technique for a patient through each visit. The patients were comfortable, relaxed and awake; in one case amnesia about the work done was reported.

A review of cerebral palsy conditions is included with description of the various symptoms and a discussion of the neurophysiology.

The authors state that there is a need for providing optimal dental care for a large number of adults with cerebral palsy and feel that their technique helps to accomplish this by "overcoming the motor symptoms without the inconvenience of general anesthesia".

Jorgensen, N.B., Levine, M.G. and Husley, C.T. Dental Management of Adult Patients with Cerebral Palsy. JADA 57:843 (Dec. 1958).

In a paper presented at the Institute of Mental Retardation for Physicians and Dentists at Fergus Falls, Minnesota, November 7, 1959 (referred to in May issue of this Bulletin), Dr. John R. Snyder of the Minnesota Health Department presented the results of a field survey of the dental problems of 113 non-institutionalized mentally retarded children. The age range was between 1-19 years with a mean of 9.4 years. Sixty-seven were males and forty-six were females; the average I.Q. was 57.

Among the findings were:

1. Tooth Decay Experiences: Based on DMF -def Index (for teeth and tooth surfaces) the average number of teeth and tooth surfaces affected by decay (D, d) in both permanent and deciduous teeth were found to be less for retarded children than for average children in the same age group. However, the number of teeth that had been filled (F, f) was much less in the retarded group than in the normal group. Also, the percentages of teeth lost (M, e) were higher for mentally retarded children for both dentitions. These findings definitely indicated that these children, as a group, had not received dental care to the same extent as average children in the same age group.

2. Periodontal Disorders: Sixty-six percent of these children had more severe forms of periodontal diseases with 5 percent having periodontitis simplex. The high prevalence and severity of periodontal diseases was directly proportional to poor oral hygiene and faulty toothbrush habits.

3. Occlusion: Forty-eight percent of these children had malocclusions severe enough to indicate the need for some orthodontic service. The majority were a) prognathic malocclusions, most of these being found in mongoloids, and b) malocclusions due to loss of teeth.

4. Other Oral Findings: Poor oral hygiene was observed four times more often than in mouths of average children. Fifty-eight percent of the retarded children used a toothbrush once a week or less and stains were present on the teeth 71 percent of the time. Oral and dental abnormalities were present in over a third of those examined.

5. Diet: The excessive use of sweet foods occurred in 17 percent of the cases. Many of the younger children favored soft foods but their diets improved (more meat and vegetables) with the eruption of the permanent teeth.

6. Factors Influencing Dental Service: Thirty-seven percent of these children had never been to a dentist. Of those who had appointments only one-half had any dental work done which was usually of an emergency nature. Sixty percent of the children were cooperative or impassive during the dental examination and were considered fully treatable in the dental office if reasonable time and patience were exercised. Twenty-three percent were uncooperative or extremely fearful and were judged to be untreatable except with general anesthesia. Understandably these latter children had the lowest intelligence quotients.

Based upon the findings, Doctor Snyder presented the following recommendations:

1. The mentally retarded child is desperately in need of dental service and the dental profession must do all in its power to help him get this service;

2. The majority of mentally retarded children are fully treatable in the dental office and dentists should not be apprehensive of their appointments;

3. Dentists should learn as much as possible about the mentally retarded through reading pertinent literature, attending meetings, and contacts with the child, his parents and physician;

4. Dentists should learn about hospital procedures for the management of dental patients who require hospital facilities;

5. The dentist should not hesitate to refer the patient if his efforts do not produce the desired results;

6. Patience, understanding and kindness are imperative in working with mentally retarded children;

7. Dentists should explore the availability of help from community agencies for special problems.

Snyder, J. R. A Resumè of the Dental Problems of Non-Institutionalized Mentally Retarded Children. Proc. of Inst. on Mental Retardation for Physicians and Dentists. Fergus Fall, Minn. (Nov. 7, 1959).

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